

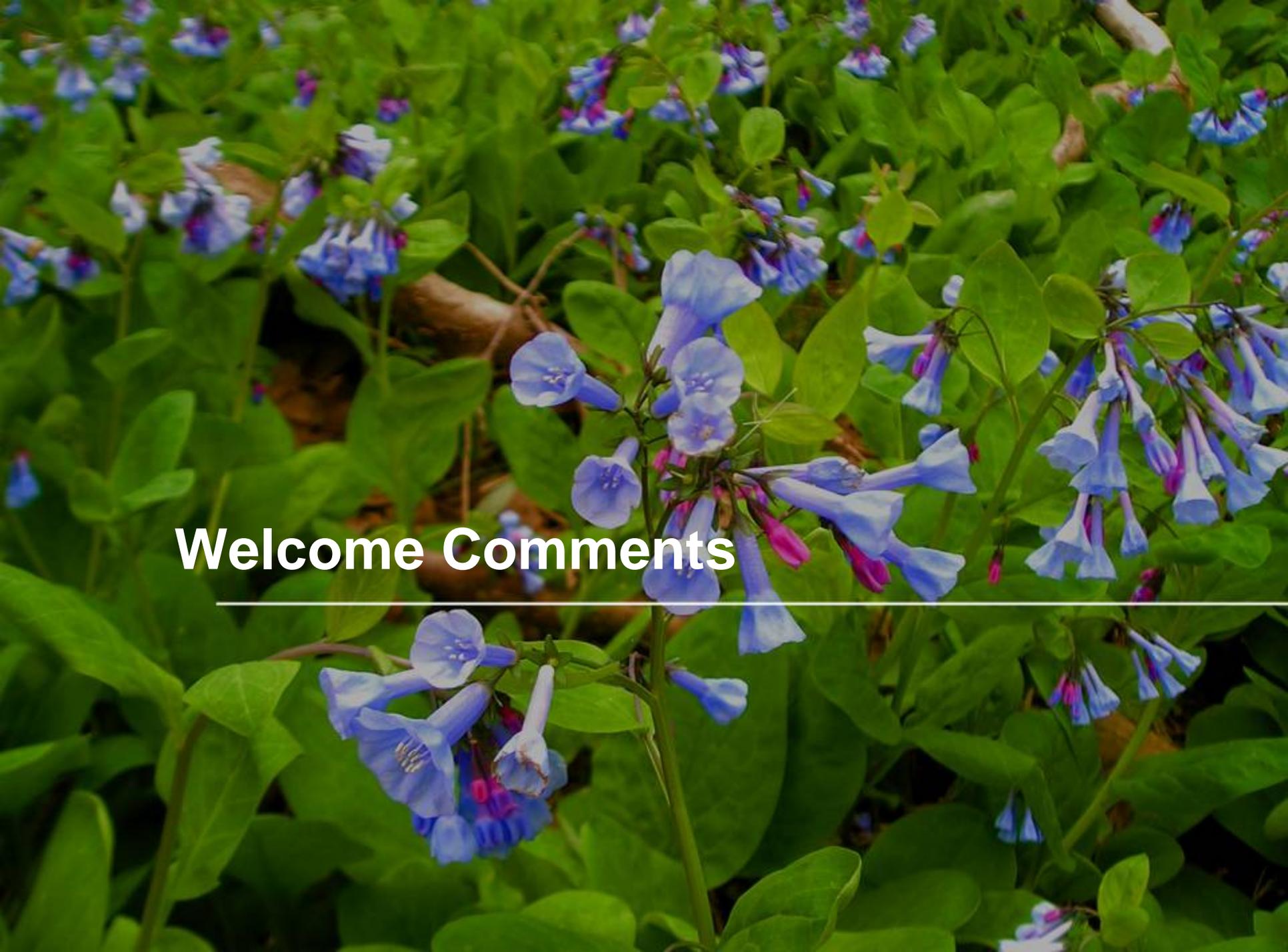
Little Rocky Run Johnny Moore Creek Watershed Management Plan

Introductory & Issues Scoping Forum
October 1, 2008

**Fairfax County Department of Public Works
and Environmental Services**

Presented by Watershed Planning & Assessment Branch,
Stormwater Management



A close-up photograph of a dense field of blue and purple flowers, likely Salpiglossis, with vibrant green foliage. The flowers are bell-shaped and hang from thin stems. The background is filled with more of the same plants, creating a lush, textured appearance.

Welcome Comments

Agenda

- Watershed Primer (10 min.)
- Draft Watershed Workbook Summary (20 min.)
 - Chapter 1 – Compilation of Overall Watershed Condition Data
 - Chapter 2 – Subwatershed Characterization
- Public Involvement Process (5 min.)
- Open House (1 hr.)

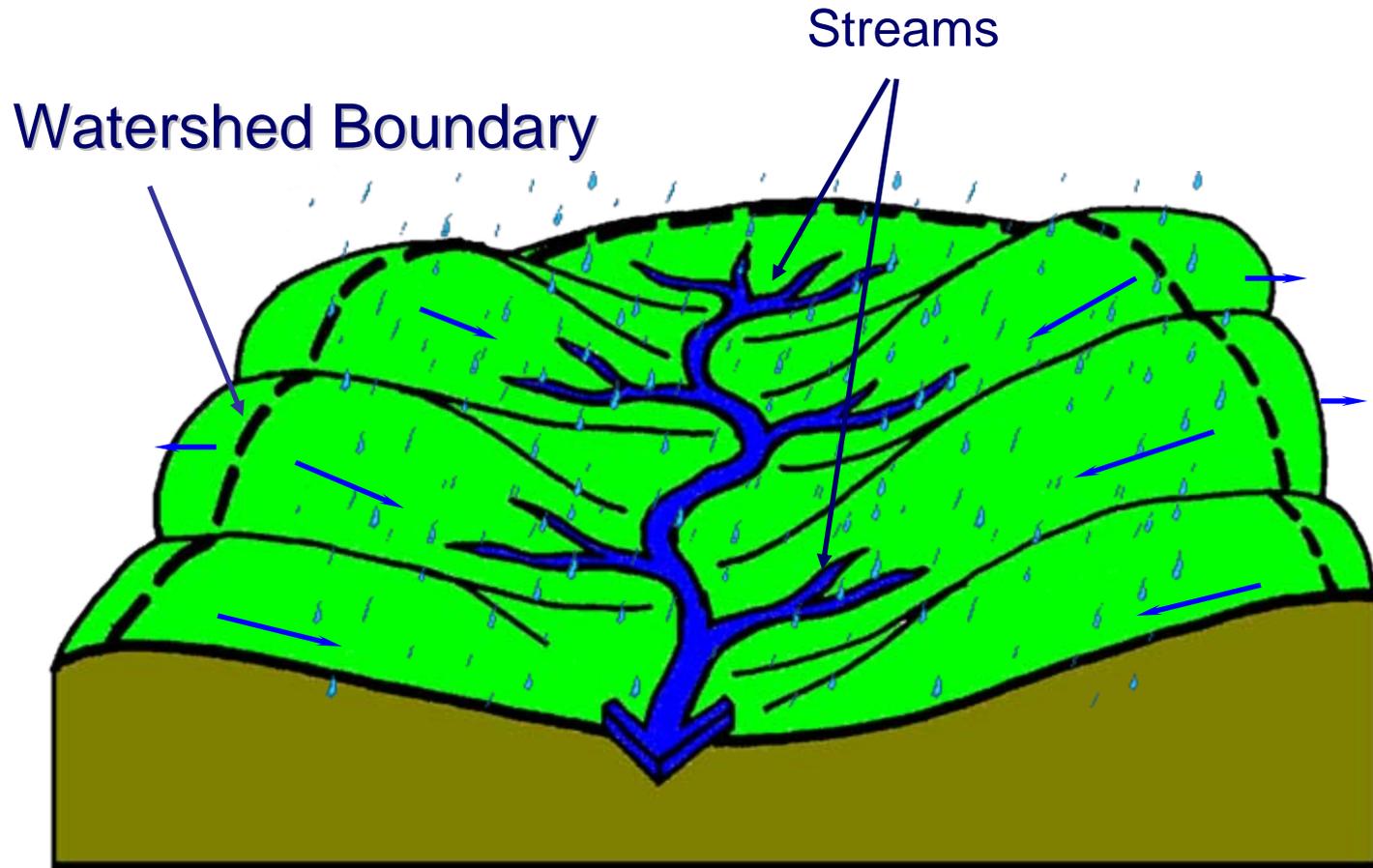
A close-up photograph of a dense field of blue and purple flowers, likely a species of Salpiglossis, with vibrant green foliage. The flowers are bell-shaped and hang from thin stems. The background is filled with more of the same plants, creating a lush, textured appearance.

Watershed Primer

An Introduction



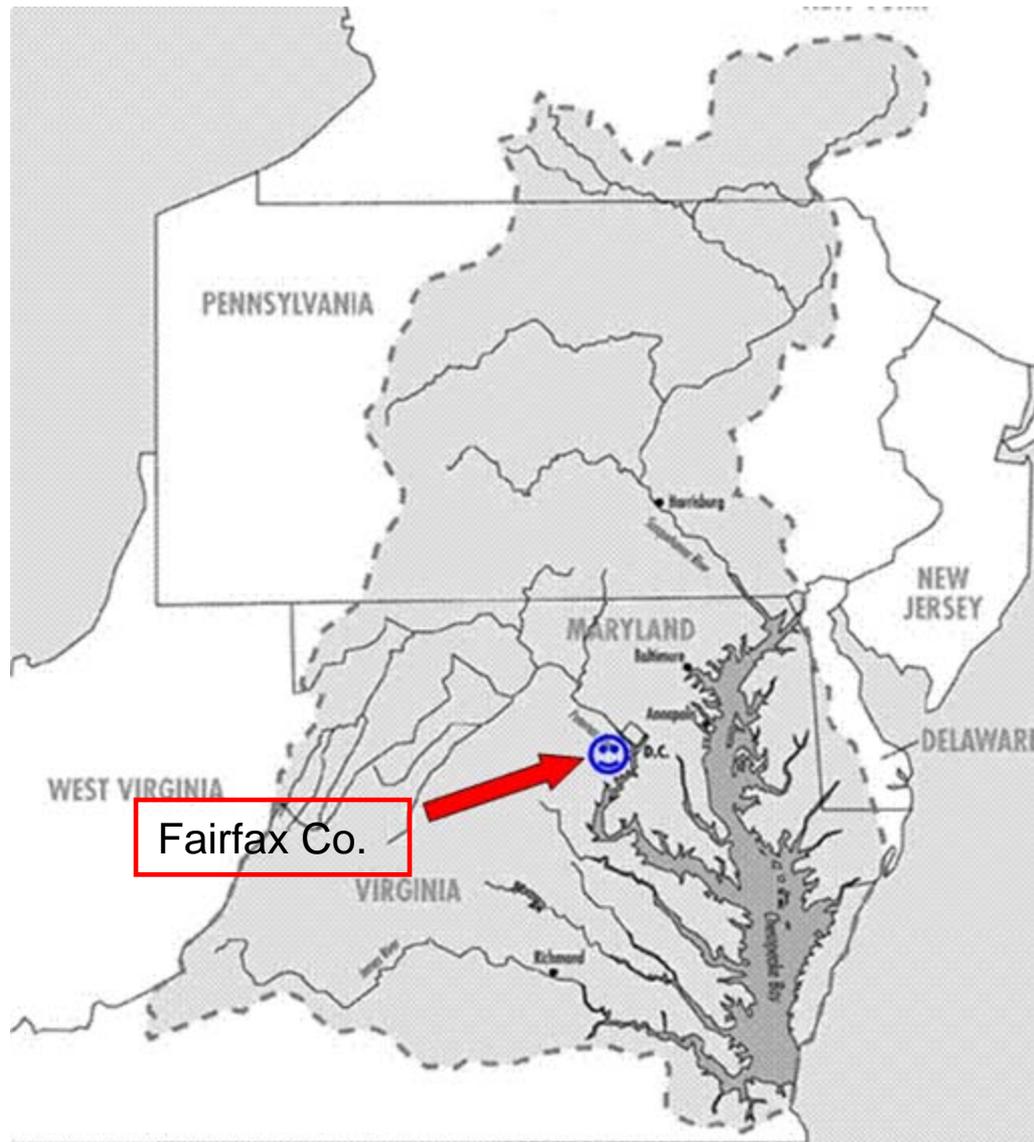
What is a Watershed?



What is a Watershed?



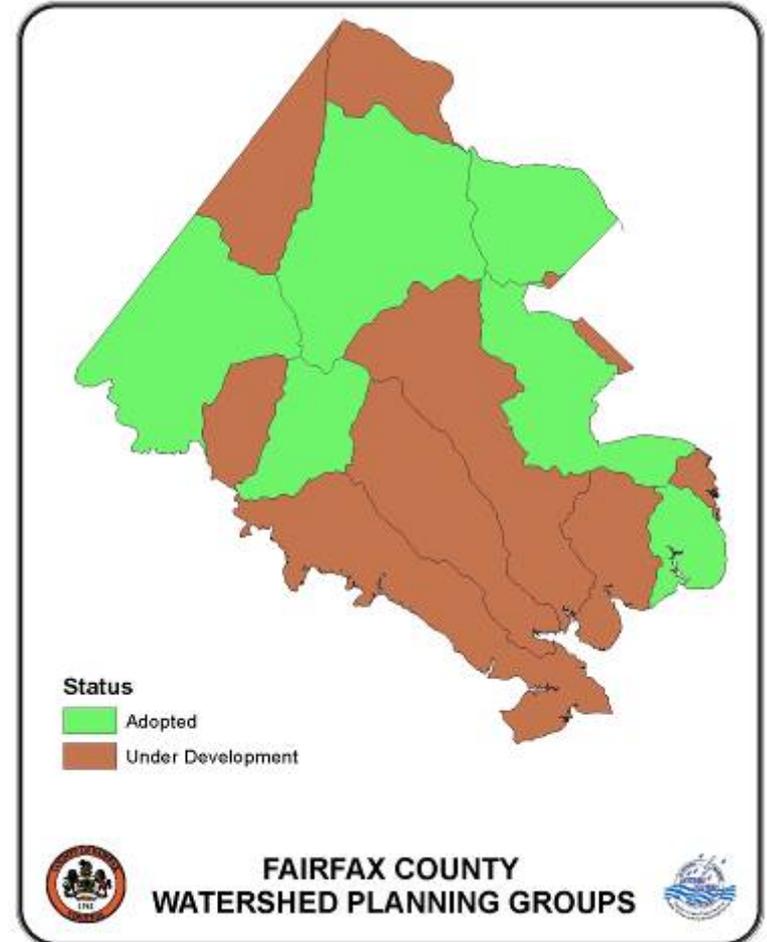
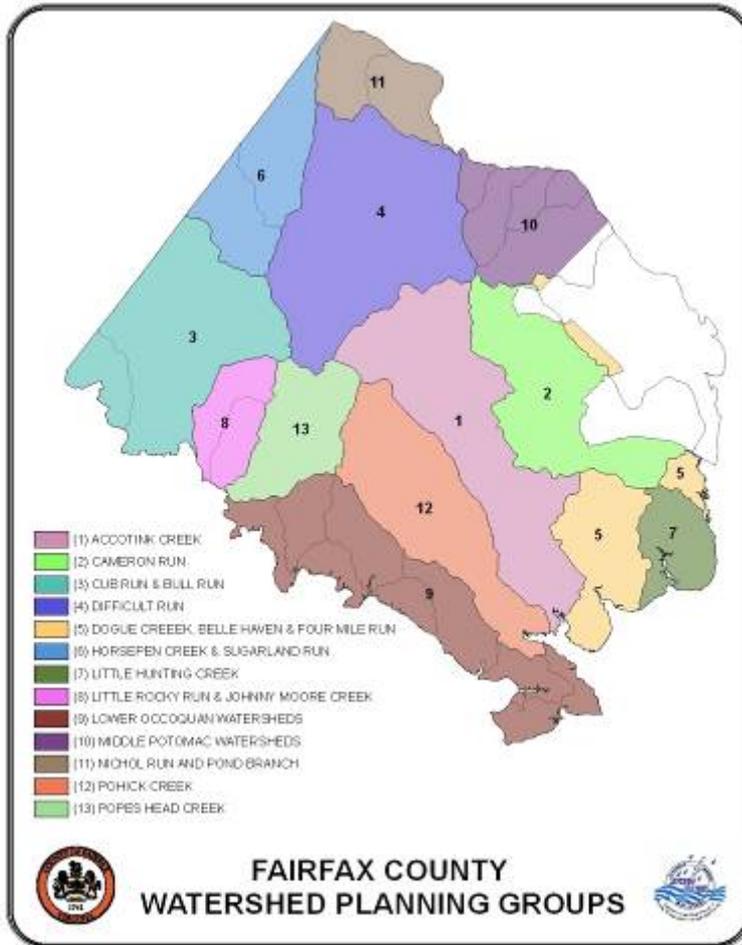
Chesapeake Bay Watershed



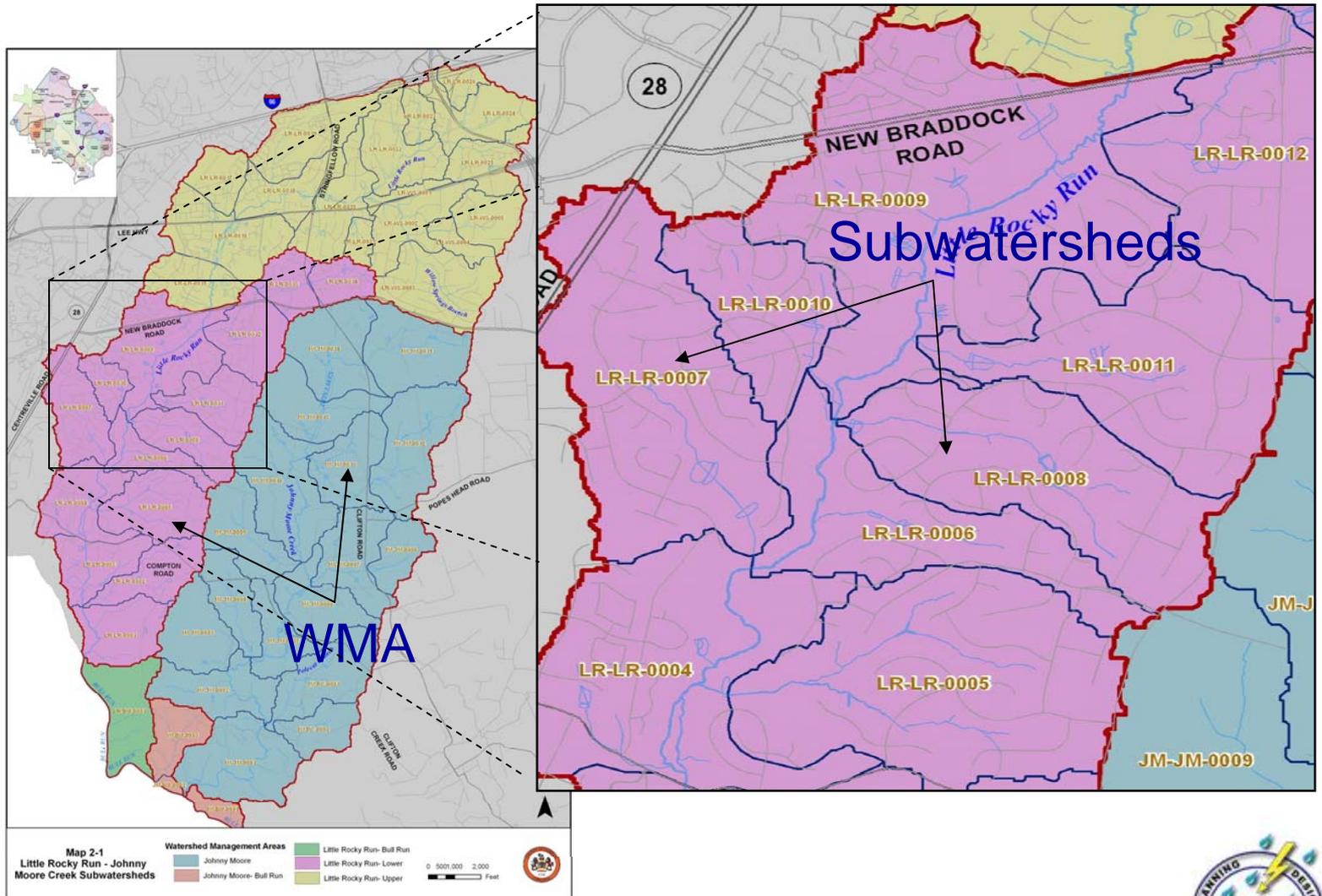
Fairfax Co.



Watershed Plan Groups



Watershed Planning Study Units



Stormwater Management





The Watershed Planning Process

Evaluate data to determine the state of the watersheds

Identify **issues** that the plan will address

Establish a **vision** for the watershed and goals that improve, enhance and protect watersheds

Develop specific **actions** to achieve the goals

Create a framework and timeframe for **implementation**

The Watershed Planning Process

- Plan Development Review of previous studies and data compilation
 - Watershed characterization (workbook)
 - Issues Scoping Forum
 - Sub-watershed Strategies
 - Draft Plan
 - Draft Plan Forum
 - Final Plan
 - Adoption by BOS





Addressing Common Watershed Issues

- ✓ Retrofit existing ponds
- ✓ Create new Best Management Practices (BMPs)
- ✓ Implement Low Impact Development (LID) Techniques
- ✓ Plant stream buffers
- ✓ Stabilize or restore streams
- ✓ Implement changes to policies and regulations
- ✓ More...

Why create watershed plans?

Healthy watersheds, healthier communities



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Watershed Workbook



Draft Watershed Workbook Summary

- Drafts of Chapters 1 and 2 Available
- Chapter 1 – Compilation of Overall Watershed Condition Data
 - Summary of previous studies related to the watersheds performed by the County and others
- Chapter 2 – Subwatershed Characterization
 - Detailed look at the condition of the watershed management areas

Chapter 1 – Compilation of Overall Watershed Condition Data

- Reports reviewed are presented by topic: Data, Policy and Proposed Projects and Improvements
- Data:
 - Occoquan Environmental Baseline Report, 1978
 - Fairfax County Stream Water Quality Reports (1997-2002)
 - Fairfax County Stream Protection Strategy Baseline Study, 2001
 - Fairfax County Stream Physical Assessment, 2005
 - Annual Reports on Fairfax County's Streams, 2005-2006
 - Virginia DEQ Data: Impaired Waters, TMDLs
 - Virginia Natural Heritage Resource Database



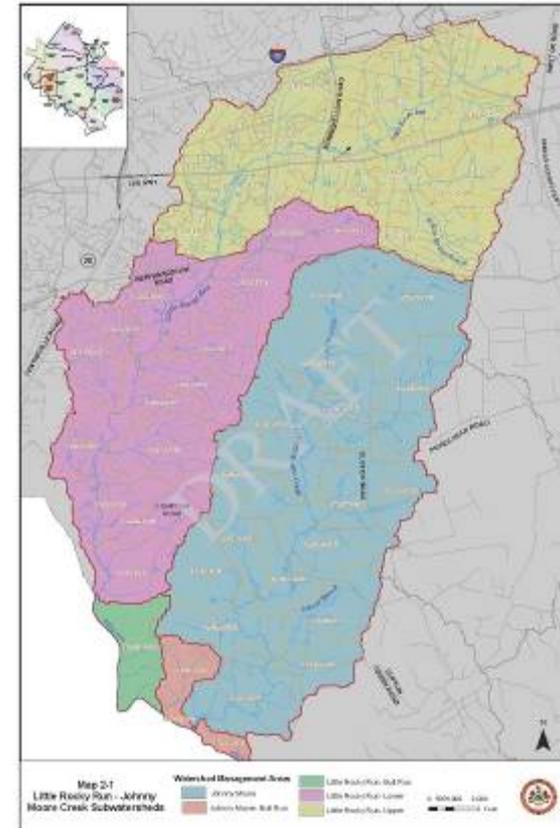
Chapter 1 – Compilation of Overall Watershed Condition Data

- Policy:
 - Infill and Residential Development Study, 2000
 - Fulfilling the promise: The Occoquan Watershed in the New Millennium, 2003
 - Fairfax County Park Authority, Natural Resource Management Plan, 2004
- Proposed Projects and Improvements
 - Proposed Drainage Plan, The Occoquan Watersheds, 1979
 - Fairfax County Master Plan Drainage Projects, continuously updated
 - Regional Stormwater Management Plan, 1989
 - The Role of Regional Ponds in Fairfax County's Watershed Management, 2003



Chapter 2 – Subwatershed Characterization

- Watersheds divided into Watershed Management Areas (WMAs)
- WMAs further divided into subwatersheds
- Data Provided on:
 - Existing and Future Land Use
 - Stormwater Infrastructure
 - Stream Condition
 - Field Reconnaissance
 - Modeling Results
 - Subwatershed Ranking



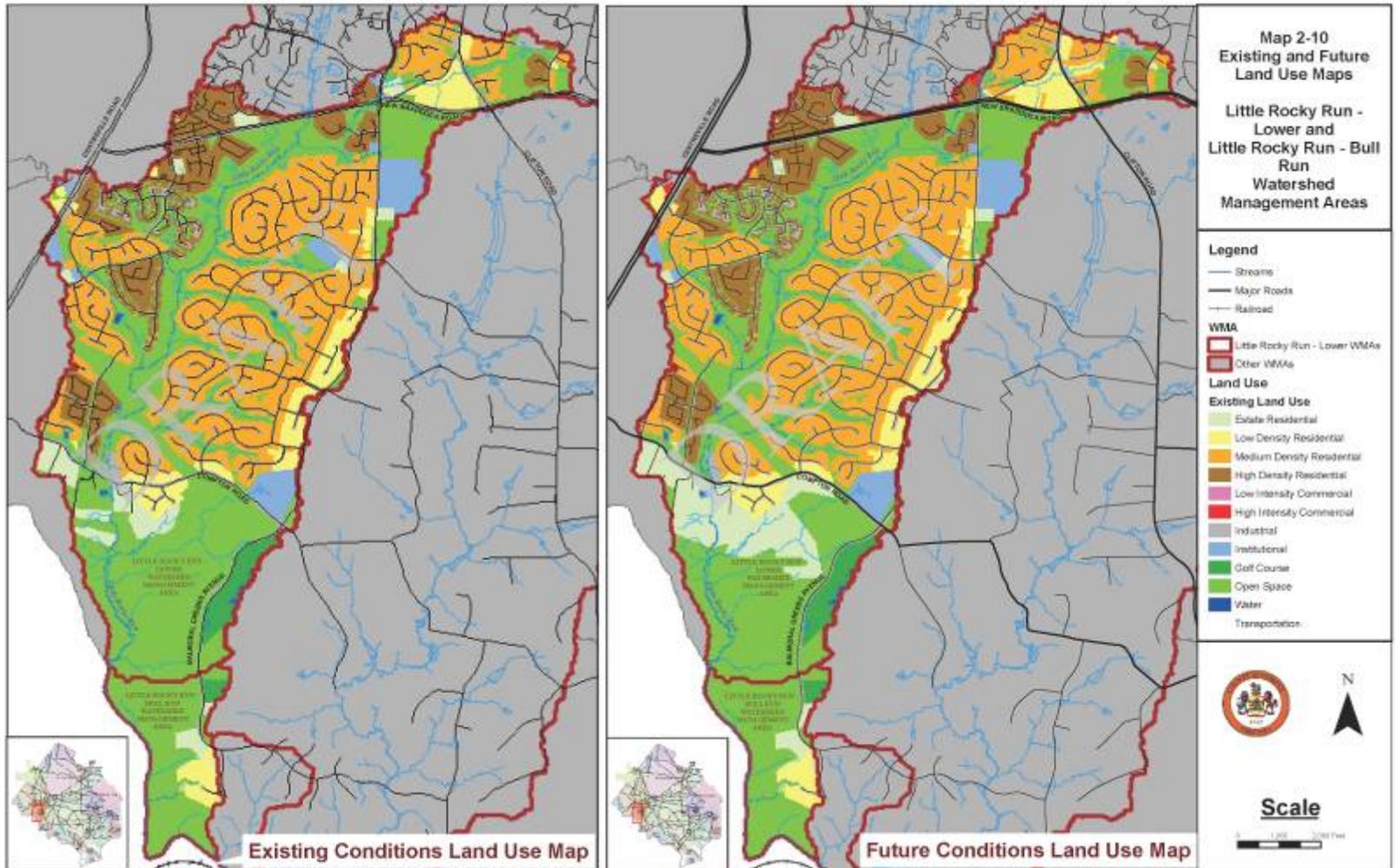


Chapter 2 – Subwatershed Characterization Existing and Future Conditions Land Use

- Generalized Land Use Data Developed from County Existing Parcel Data and Zoning Data
- Resource Conservation (RC) District
 - development is limited to one dwelling unit per 5 acres
 - rezoned by the Fairfax County Board of Supervisors in 1982 to protect the Occoquan Reservoir
 - All of Johnny Moore Creek watershed and southern portion of Little Rocky Run

Chapter 2 – Subwatershed Characterization

Existing and Future Conditions Land Use



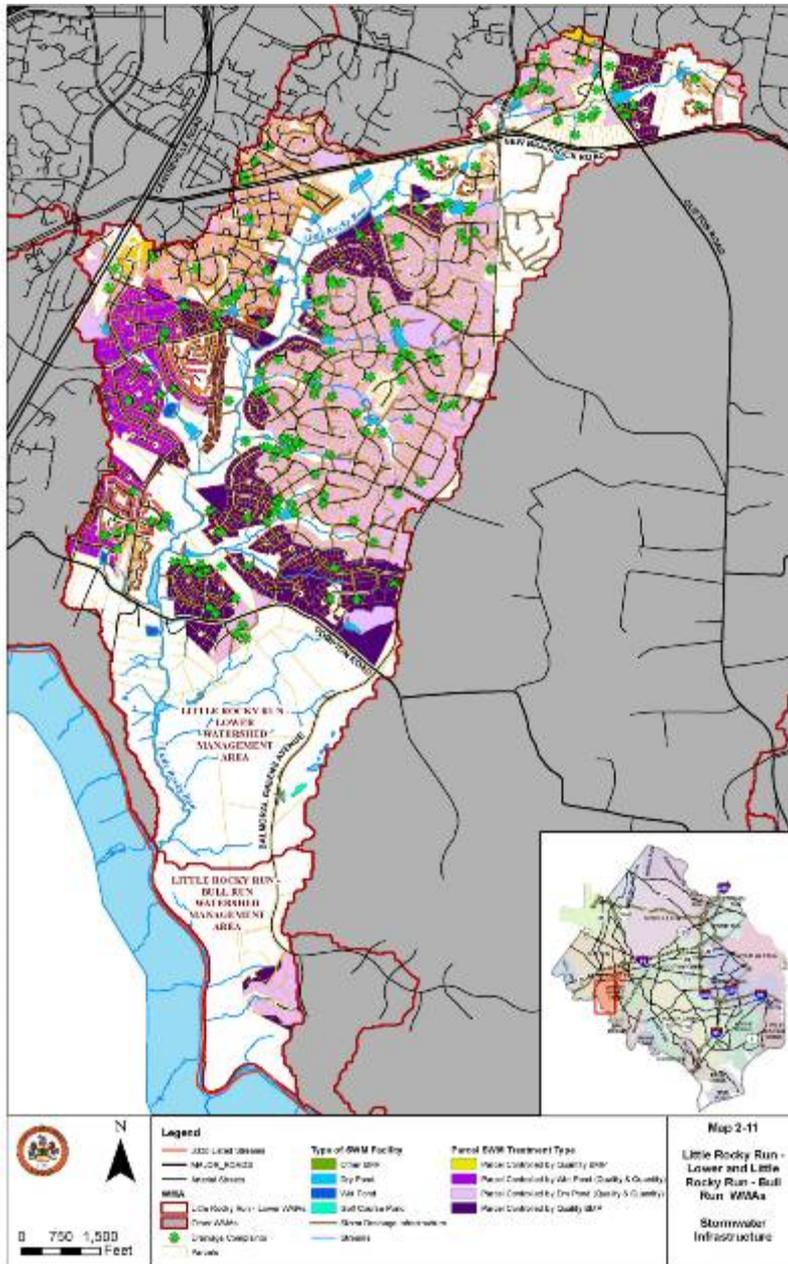


Chapter 2 – Subwatershed Characterization Stormwater Infrastructure

- Location of stormwater management facilities
- Parcels with stormwater management control
 - Quantity
 - Quality
 - Quantity and Quality
- Complaints – from County’s database
- Storm sewer system – from County StormNet



Chapter 2: Subwatershed Characterization Stormwater Infrastructure





Chapter 2 – Subwatershed Characterization Stream Condition

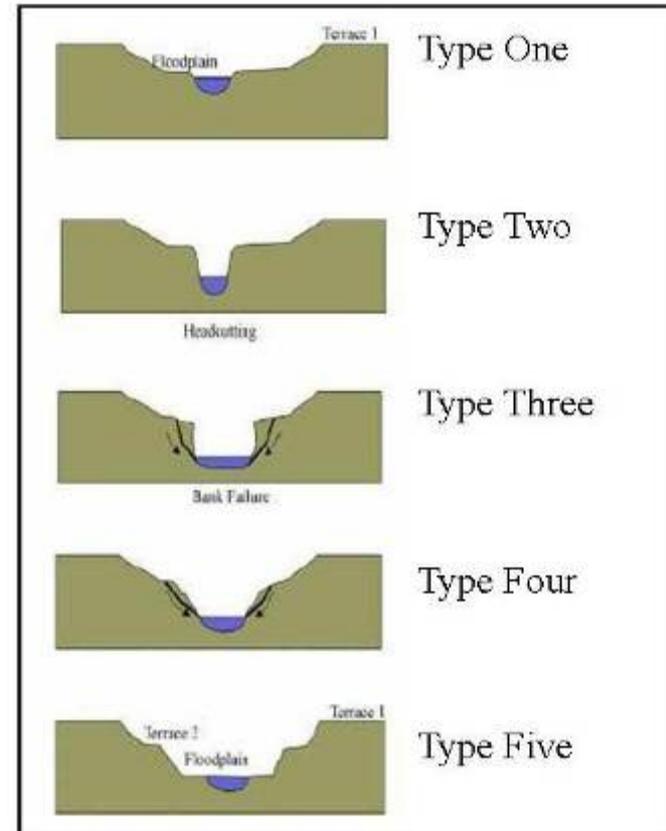
- From 2005 Stream Physical Assessment
- Impact Areas:
 - Utility
 - Obstruction
 - Ditch
 - Head Cut
 - Dump
 - Pipe
 - Crossing
- Erosion Areas

Chapter 2 – Subwatershed Characterization

Stream Condition

- Channel Evolution Model

| CEM Type | Description |
|----------|-----------------------------------------------------|
| 1 | Stable stream banks and developed channel |
| 2 | Deep incised channel |
| 3 | Unstable stream banks and actively widening channel |
| 4 | Stream bank stabilizing and channel developing |
| 5 | Stable stream banks and widened channel |



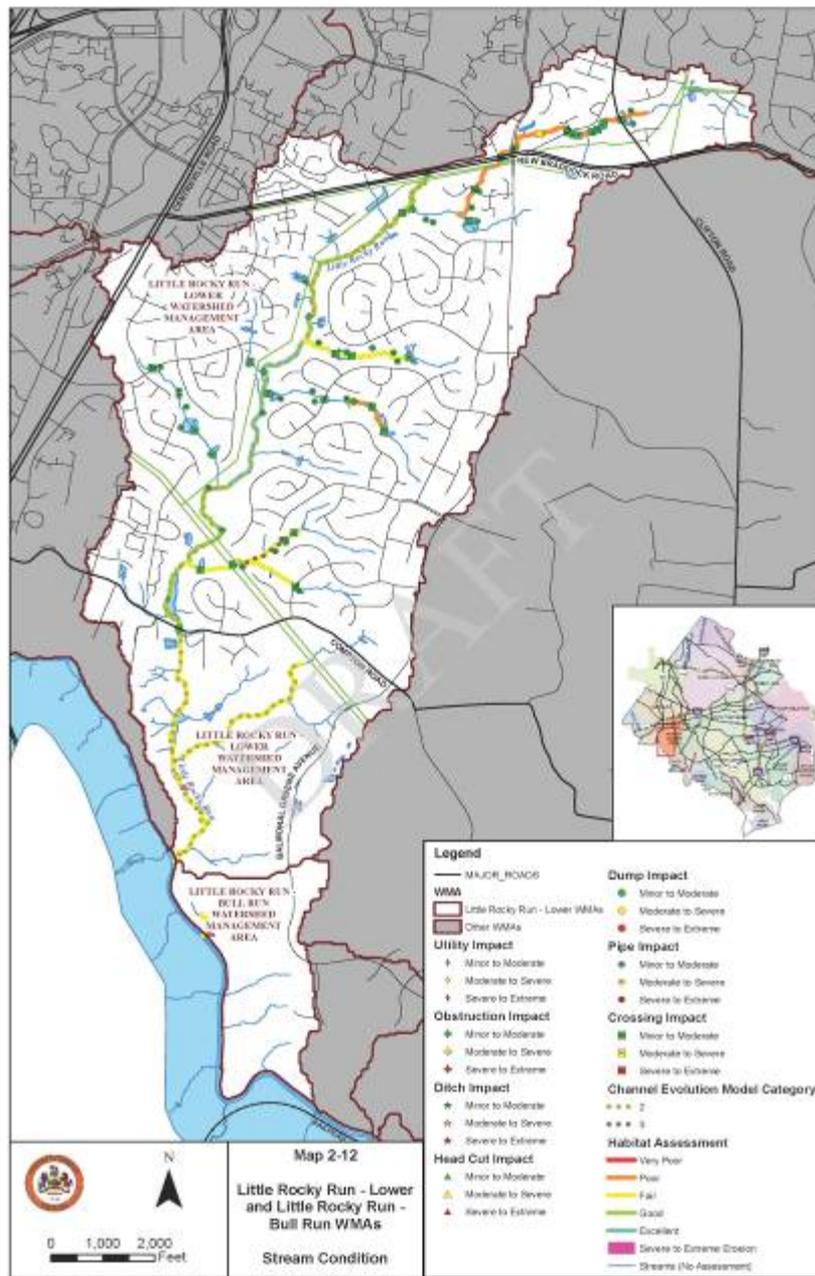
Incised Channel Evolution Model
(Schumm, Harvey, and Watson, 1984)



Chapter 2 – Subwatershed Characterization Stream Condition

- Habitat Assessment
- Stream reaches scored on several visual indicators of stream health

Chapter 2: Subwatershed Characterization Stream Condition



Chapter 2 – Subwatershed Characterization Field Reconnaissance

- Problem areas revisited in June 2008 to verify and document conditions and stormwater controls



Erosion on small tributary near Cedar Ridge Drive in the Johnny Moore Creek WMA

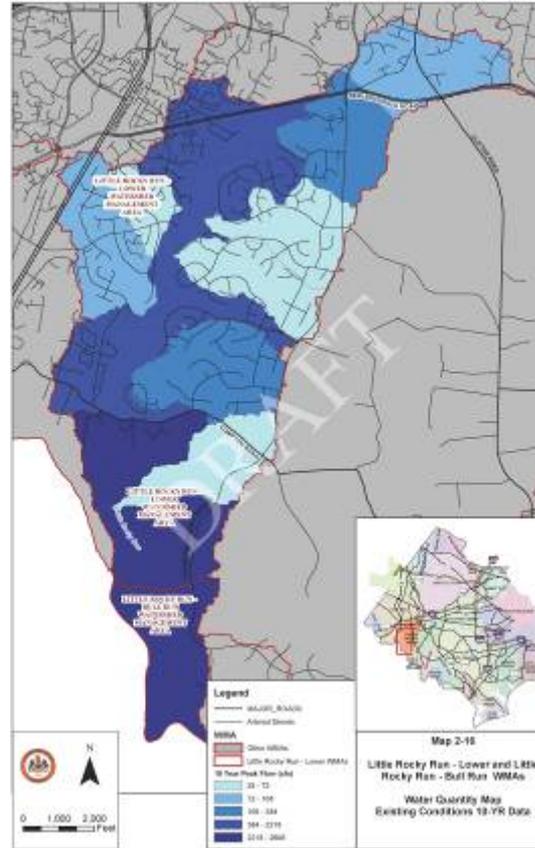
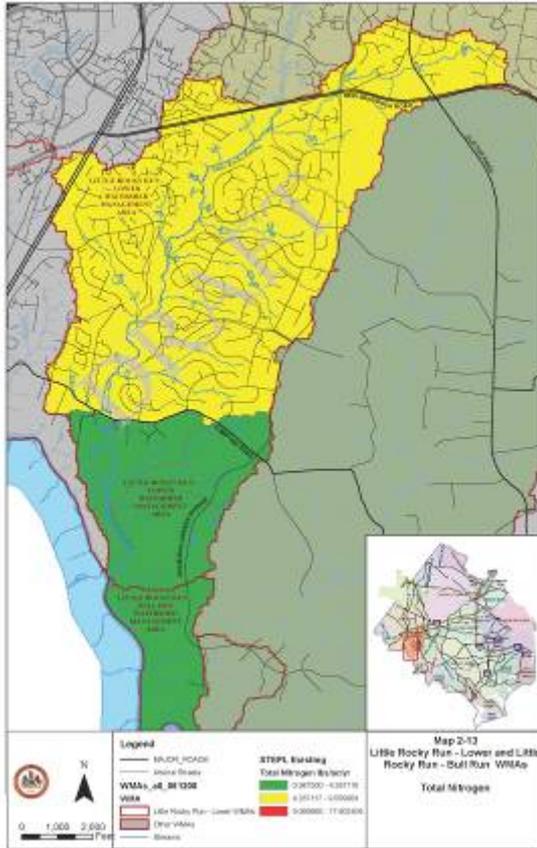


Erosion and head cut on ditch in Little Rocky Run subdivision



Headcut on tributary to Little Rocky Run

Chapter 2 – Subwatershed Characterization Preliminary Modeling Results



Chapter 2 – Subwatershed Characterization

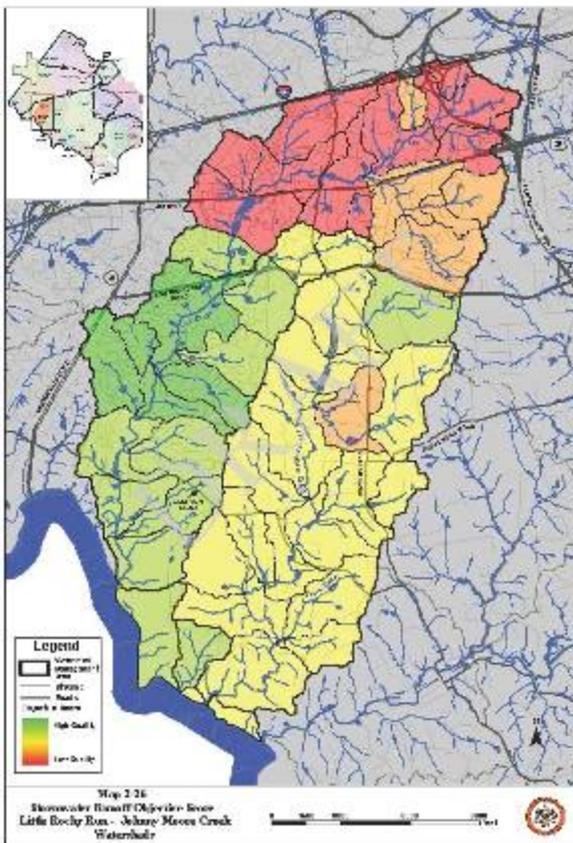
Subwatershed Ranking

- Countywide watershed planning goals
 1. Improve and maintain watershed functions in Fairfax County, including water quality, habitat, and hydrology.
 2. Protect human health, safety, and property by reducing stormwater impacts.
 3. Involve stakeholders in the protection, maintenance and restoration of county watersheds.
- Watershed Planning Objectives
 1. Hydrology
 2. Habitat
 3. Stream Water Quality
 4. Drinking Water Quality
 5. Stewardship

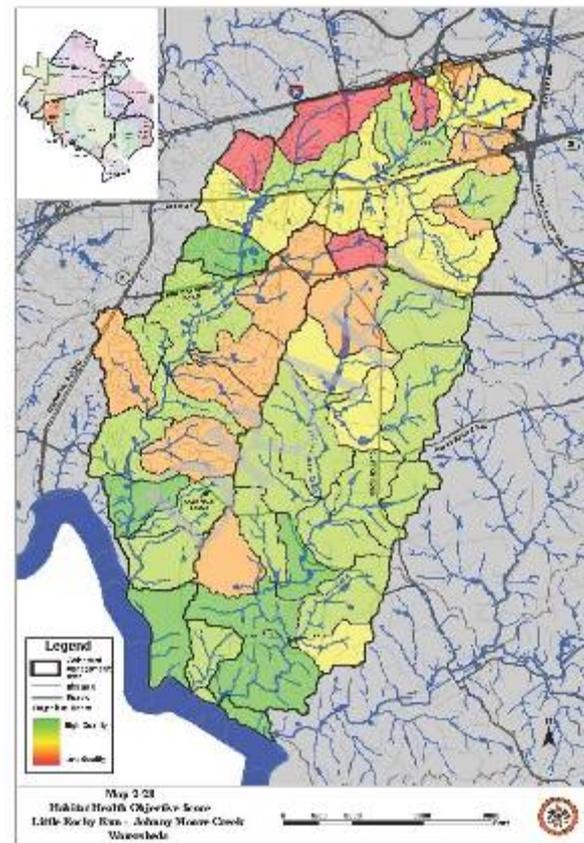
Chapter 2 – Subwatershed Characterization Subwatershed Ranking

Examples of Objective Maps

Stormwater Runoff

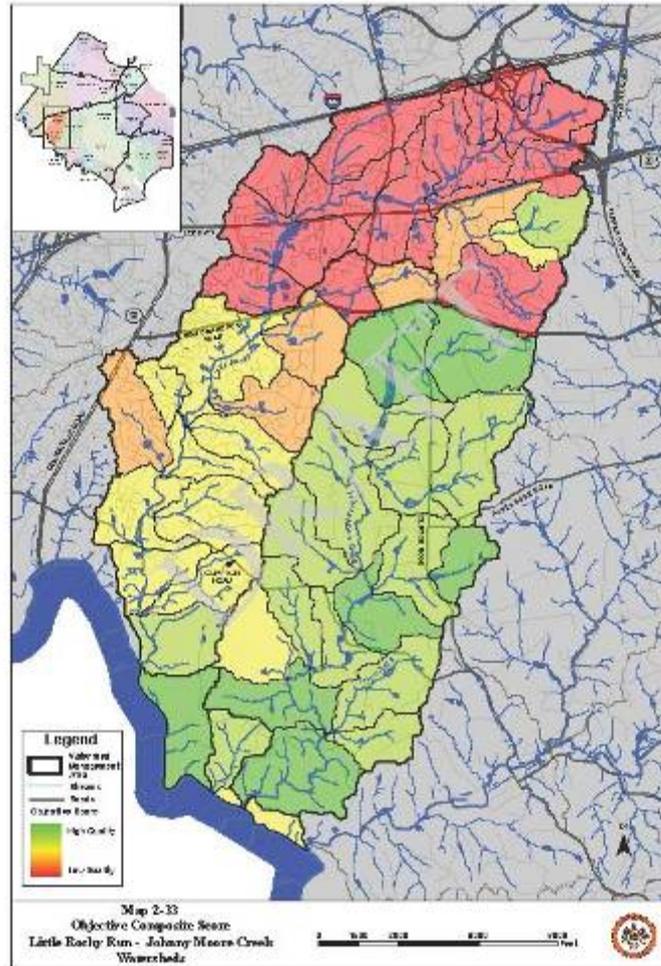


Habitat Health



Chapter 2 – Subwatershed Characterization Subwatershed Ranking

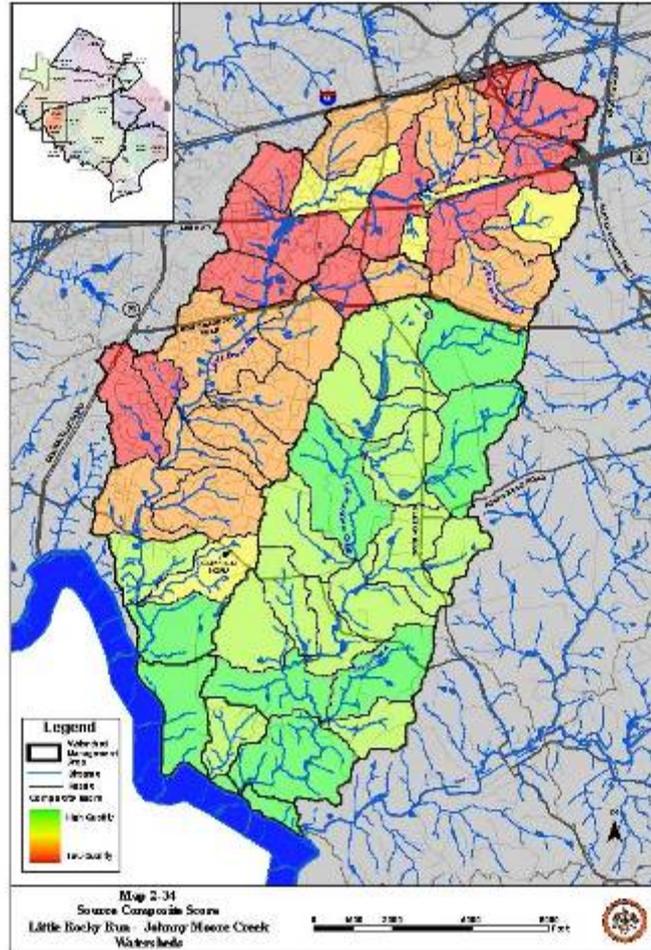
Overall Objective Composite Score



Chapter 2 – Subwatershed Characterization

Subwatershed Ranking

Source Composite Score



Summary

- Conditions of the WMAs
- Watershed Conditions compared to the rest of the County
- Use of this data in the watershed planning process

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Public Participation

Public Participation

Several ways to comment and participate:

Attend the public forum and watershed plan workshops

Email comments: watersheds@fairfaxcounty.gov

Phone Fairfax County: 703-324-5500 TTY 711 or

Use the Virtual Forum on the web:

www.fairfaxcounty.gov/dpwes/watersheds/johnny_moorecreek.htm

Watershed Advisory Group (WAG)

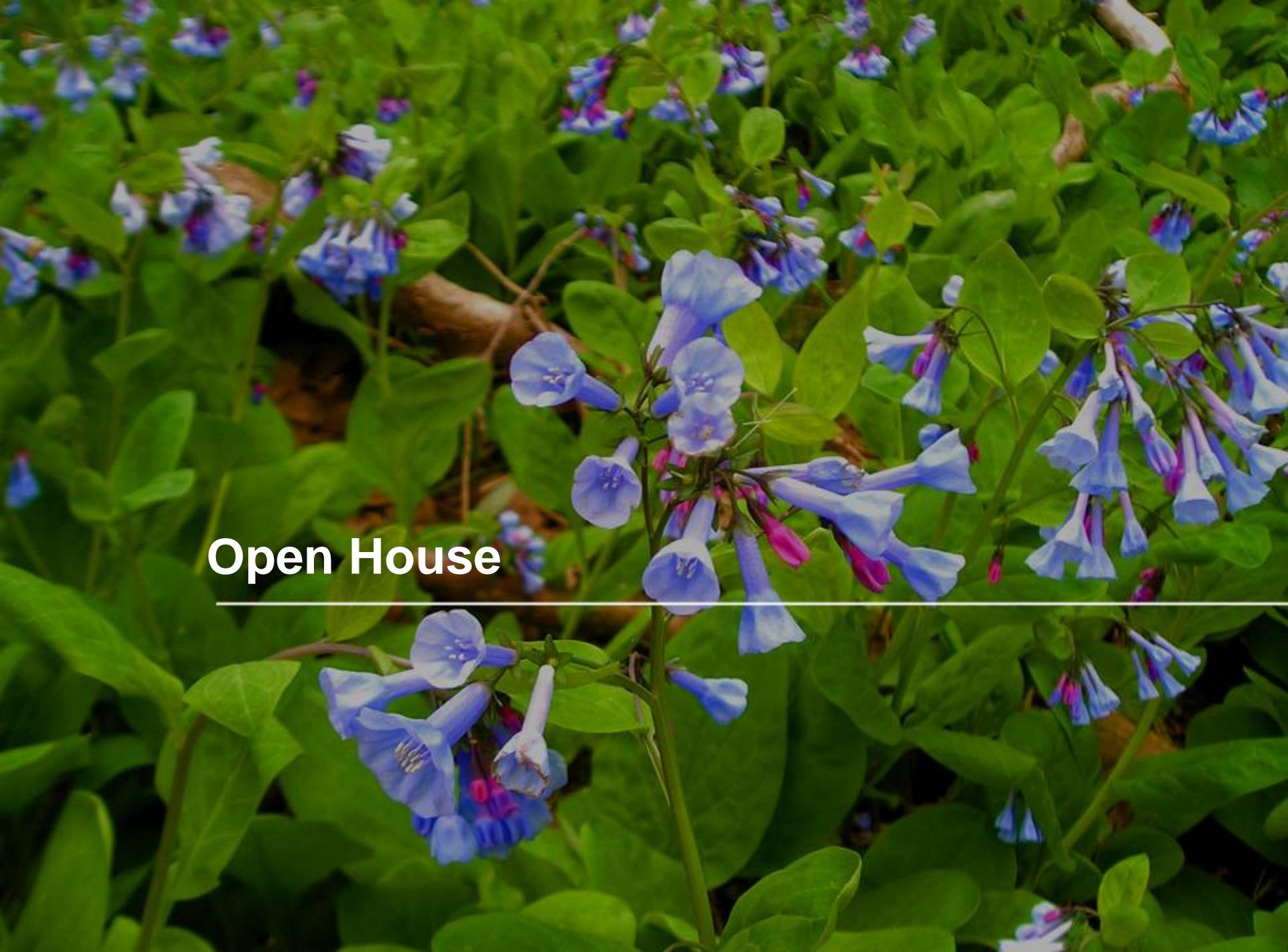
Following the workshop, an advisory group of 12 to 20 members will be formed. It will:

Include representative watershed interests: businesses and resident organizations, such as HOAs.

Review plan ideas and projects: highlight other problem areas or review locations for solutions.

Serve as a liaison to the community: share ideas with groups and solicit input for the plan.

If interested in serving on the WAG, tell us tonight or contact karenfirehock@virginia.edu

A close-up photograph of a dense field of flowers. The flowers are primarily light blue and purple, with some showing darker purple or pinkish hues. They are arranged in clusters on thin stems. The foliage consists of bright green, rounded leaves. The background is filled with more of the same plants, creating a lush, textured appearance. The lighting is bright, suggesting a sunny day.

Open House
